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10/538,594	04/07/2006	Stefan Jung	I432.119.101/P30277	3759

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EXAMINER
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WEST, JEFFREY R

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/538,594	<b>Applicant(s)</b> JUNG ET AL.	
	<b>Examiner</b> Jeffrey R. West	<b>Art Unit</b> 2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 24-50 is/are pending in the application.
- 4a) Of the above claim(s) 34-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-33 and 47-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/07/07</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Oath/Declaration***

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because each of the inventors are listed as the "First Inventor".

### ***Specification***

3. The abstract of the disclosure is objected to because its length is less than the required 50 words. Correction is required. See MPEP § 608.01(b).

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

5. Claims 24, 27, 28, 31, 33, and 47-50 are objected to because of the following informalities:

In claim 24, line 2, to avoid problems of antecedent basis later in the claim, "at least one reference position" should be ---a reference position---.

In claim 24, line 10, to avoid problems of antecedent basis, "the processor unit" should be ---the at least one processor unit---.

In claim 24, line 18, to avoid problems of antecedent basis, "the processor unit" should be ---the at least one processor unit---.

In claim 24, line 18, to avoid problems of antecedent basis, "the actual distance" should be ---an actual distance---.

In claim 24, line 23, to avoid problems of antecedent basis, "the distance of the first" should be ---a distance of the first---.

In claim 24, line 24, to avoid problems of antecedent basis, "the distance of a second" should be ---a distance of a second---.

In claim 24, lines 24-25, to avoid confusion, "module which receives the first message from" should be ---module, which receives the first message, from---.

In claim 24, line 28, to avoid problems of antecedent basis, "the distance of the processor unit" should be ---a distance of a processor unit---.

In claim 24, line 29, to avoid problems of antecedent basis, "the distance information" should be ---the first distance information---.

In claim 24, line 32, to avoid problems of antecedent basis, "the distance of a third" should be ---a distance of a third---.

In claim 24, line 32, to avoid confusion, "module which" should be ---module, which---.

In claim 24, line 38, to avoid problems of antecedent basis, "the distance" should be something similar to ---the respective distances---.

In claim 24, line 39, to avoid problems of antecedent basis, "the physical" should be ---physical---.

In claim 24, line 43, to avoid problems of antecedent basis, "the row number" should be ---a row number---.

In claim 24, line 48, to avoid problems of antecedent basis, "the row parameter" should be ---a row parameter---.

In claim 24, line 51, to avoid problems of antecedent basis, "the column parameter" should be ---a column parameter---.

In claim 27, line 2, to avoid problems of antecedent basis, "the electrical" should be ---the at least one electrical---.

In claim 27, line 2, to avoid problems of antecedent basis, "the data" should be ---the at least one data---.

In claim 28, line 2, to avoid problems of antecedent basis, "the processor" should be ---the at least one processor---.

In claim 28, line 3, to avoid problems of antecedent basis, "the electrical power supply" should be ---the at least one electrical power supply---

In claim 28, line 3, to avoid problems of antecedent basis, "the electrical power line" should be ---the at least one electrical power line---

In claim 28, line 4, to avoid problems of antecedent basis, "the data transmission" should be ---the at least one data transmission---

In claim 31, line 2, to avoid problems of antecedent basis, "the processor" should be ---the at least one processor---

In claim 33, line 7, to avoid problems of antecedent basis, "the processor unit" should be ---the at least one processor unit---

In claim 33, line 15, to avoid problems of antecedent basis, "the processor unit" should be ---the at least one processor unit---

In claim 33, line 15, to avoid problems of antecedent basis, "the actual distance" should be ---an actual distance---

In claim 33, lines 23-24, to avoid problems of antecedent basis, "the distance of the first" should be ---a distance of the first---

In claim 33, line 24, to avoid problems of antecedent basis, "the distance of a second" should be ---a distance of a second---

In claim 33, lines 24-25, to avoid confusion, "module which receives the first message from" should be ---module, which receives the first message, from---

In claim 33, line 28, to avoid problems of antecedent basis, "the distance of the processor unit" should be ---a distance of a processor unit---

In claim 33, line 29, to avoid problems of antecedent basis, "the distance information" should be ---the first distance information---.

In claim 33, line 32, to avoid problems of antecedent basis, "the distance of a third" should be ---a distance of a third---.

In claim 33, lines 32-33, to avoid confusion, "module which" should be ---module, which---.

In claim 33, line 39, to avoid problems of antecedent basis, "the distance" should be something similar to ---the respective distances---.

In claim 33, line 40, to avoid problems of antecedent basis, "the physical" should be ---physical---.

In claim 33, line 44, to avoid problems of antecedent basis, "the row number" should be ---a row number---.

In claim 33, line 49, to avoid problems of antecedent basis, "the row parameter" should be ---a row parameter---.

In claim 33, line 52, to avoid problems of antecedent basis, "the column parameter" should be ---a column parameter---.

In claim 47, line 7, to avoid problems of antecedent basis, "the distance of the first" should be ---a distance of the first---.

In claim 47, line 8, to avoid problems of antecedent basis, "the distance of a second" should be ---a distance of a second---.

In claim 47, lines 8-9, to avoid confusion, "module which receives the first message from" should be ---module, which receives the first message, from---.

In claim 47, line 12, to avoid problems of antecedent basis, "the distance of the processor unit" should be ---a distance of a processor unit---.

In claim 47, line 13, to avoid problems of antecedent basis, "the distance information" should be ---the first distance information---.

In claim 47, line 16, to avoid problems of antecedent basis, "the distance of a third" should be ---a distance of a third---.

In claim 47, line 16, to avoid confusion, "module which" should be ---module, which---.

In claim 47, line 22, to avoid problems of antecedent basis, "the distance" should be something similar to ---the respective distances---.

In claim 47, line 23, to avoid problems of antecedent basis, "the physical" should be ---physical---.

In claim 48, line 2, to avoid problems of antecedent basis, "the row" should be ---a row---.

In claim 49, line 1, "the processor unit" should be ---the processor units---.

In claim 49, line 2, to avoid problems of antecedent basis, "the row parameter" should be ---a row parameter---.

In claim 49, line 6, to avoid problems of antecedent basis, "the column parameter" should be ---a column parameter---.

In claim 50, line 6, to avoid problems of antecedent basis, "the processor unit" should be ---the at least one processor unit---.



In claim 50, line 14, to avoid problems of antecedent basis, "the processor unit" should be ---the at least one processor unit---.

In claim 50, line 14, to avoid problems of antecedent basis, "the actual distance" should be ---an actual distance---.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 24-33 and 47-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 24 is rejected under 35 U.S.C. 112, second paragraph, because lines 14-15 refer to "the surface paneling module of a processor unit" while the claim earlier presents "each surface paneling module comprising...at least one processor unit" and therefore it is unclear to one having ordinary skill in the art whether the surface paneling module is part of a processor unit or if the processor unit is part of the surface paneling module.

Claim 24 is also considered to be vague and indefinite because lines 28-29 recite, "determining the distance of the processor unit of the second surface paneling module from the reference position as a function of the distance information." Claim 24, however, earlier recites "producing a first message with a processor unit of a first

surface paneling module, with the first message containing first distance information which contains the distance of the first surface paneling module or the distance of a second surface paneling module which receives the first message from the reference position". This limitation contains "distance information which contains...the distance of a second surface paneling module...from the reference position" and not distance information from "the processor unit" of the second surface paneling module from the reference position. Additionally, claim 24, is for "A method for determining a distance from surface paneling modules of a surface paneling module arrangement to at least one reference position". Therefore, it is unclear to one having ordinary skill in the art whether the distance information is with respect to the paneling module from the reference position or with respect to a processor unit of the paneling module from the reference position.

Claim 24 is considered to be vague and indefinite because lines 42-45 contain limitations set forth in parenthesis which renders the claim indefinite because it is unclear whether the limitations in parenthesis are part of the claimed invention. See MPEP § 2173.05(d).

Claim 24 is also considered to be vague and indefinite because lines 45-46 refer to messages that "are in each case transmitted to processor units of adjacent surface paneling modules". This limitation is first unclear because there is no indication to one having ordinary skill in the art as to what "each case" refers (i.e. each case of what?). Additionally, since the claim recites several different surface paneling modules, it is unclear to one having ordinary skill in the art as to which

surface paneling modules are considered to be “adjacent” and whether “adjacent” surface paneling modules refers to surface paneling modules that are adjacent to a current surface paneling module on one side, two sides, etc.

Claim 24 is considered to be vague and indefinite because lines 48, 50, 51, and 53 refer to “the received message” and line 58 refers to “the message”. Claim 24, however, refers to “a first message”, “a second message” and “position determination messages”. Therefore, it is unclear to one having ordinary skill in the art as to what message “the received message” and “the message” refers.

Claim 24 is also rejected under 35 U.S.C. 112, second paragraph, because it refers to “the previously stored row number of the processor unit” (lines 48-49) while there is no previous mention of any “previously stored row number” or any indication to one having ordinary skill in the art as to which of the processor units is considered to be “the processor unit”.

Claim 24 is further rejected under 35 U.S.C. 112, second paragraph, for “the stored column number” (line 52) without a previous mention of any “stored column number”, “the method steps described above” (line 55) without clearly indicating to one having ordinary skill in the art as to which method steps are being referred, “these” (line 58) without an indication as to what “these” refers, and “respective adjacent surface paneling module” (line 59) wherein many different surface paneling modules have been referenced rendering it unclear as to what modules are considered to be “adjacent” as well as whether “adjacent” surface paneling modules

refers to surface paneling modules that are adjacent to a current surface paneling module on one side, two sides, etc.

Claim 25 is considered to be vague and indefinite because it refers to “the processor unit of the surface paneling module’s own distance value”. First, it is unclear to one having ordinary skill in the art as to which processor unit is considered to be “the processor unit”. Second, it is unclear to one having ordinary skill in the art what it means to have a “processor unit of the...own distance value”. Additionally, there is no previous limitation for surface paneling modules having specific distance values and therefore it is unclear to one having ordinary skill in the art as to what “the surface paneling module’s own distance value” refers.

Claim 25 is additionally rejected under 35 U.S.C. 112, second paragraph, because it refers to “the previously stored distance value” (line 3) without a previous mention of any “previously stored distance value”, “the respectively received message” (line 4) without a clear indication as to which of the previously described messages is considered to correspond to the “respectively received message”, “this” (line 6) without an indication as to what “this” refers (i.e. distance value or distance message), “in each case” (line 7) without an indication as to what cases are being referred, and “the portal processor” (line 9) without any designation as to which processor is considered to be “the portal processor”.

Claim 25 is considered to be vague and indefinite because line 4 contains limitations set forth in parenthesis which renders the claim indefinite because it is

unclear whether the limitations in parenthesis are part of the claimed invention. See MPEP § 2173.05(d).

Claim 26 is considered to be vague and indefinite because it recites, "wherein the distance value has a value which is greater by a predetermined value than its own distance value". In such a limitation, it is unclear what it means to have a distance value that is greater than its own distance value.

The term "some" in claims 31 and 32 is a relative term which renders the claims indefinite. The term "some" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim 33 is rejected under 35 U.S.C. 112, second paragraph, because lines 11-12 refer to "the surface paneling module of a processor unit" while the claim earlier presents "each surface paneling module comprising...at least one processor unit" and therefore it is unclear to one having ordinary skill in the art whether the surface paneling module is part of a processor unit or if the processor unit is part of the surface paneling module.

Claim 33 is also considered to be vague and indefinite because lines 28-29 recite, "determining the distance of the processor unit of the second surface paneling module from the reference position as a function of the distance information." Claim 33, however, earlier recites "providing a first message by a processor unit of a first surface paneling module, with the first message containing first distance information which contains the distance of the first surface paneling module or the distance of a

second surface paneling module which receives the first message from the reference position". This limitation contains "distance information which contains...the distance of a second surface paneling module...from the reference position" and not distance information from "the processor unit" of the second surface paneling module from the reference position. Therefore, it is unclear to one having ordinary skill in the art whether the distance information is with respect to the paneling module from the reference position or with respect to a processor unit of the paneling module from the reference position.

Claim 33 is considered to be vague and indefinite because lines 44-47 contain limitations set forth in parenthesis which renders the claim indefinite because it is unclear whether the limitations in parenthesis are part of the claimed invention. See MPEP § 2173.05(d).

Claim 33 is also considered to be vague and indefinite because lines 47-48 refer to messages that "are in each case transmitted to processor units of adjacent surface paneling modules". This limitation is first unclear because there is no indication to one having ordinary skill in the art as to what "each case" refers (i.e. each case of what?). Additionally, since the claim recites several different surface paneling modules, it is unclear to one having ordinary skill in the art as to which surface paneling modules are considered to be "adjacent" and whether "adjacent" surface paneling modules refers to surface paneling modules that are adjacent to a current surface paneling module on one side, two sides, etc.

Claim 33 is considered to be vague and indefinite because lines 49, 51, 52, and 54 refer to "the received message" and line 58 refers to "the message". Claim 33, however, refers to "a first message", "a second message" and "position determination messages". Therefore, it is unclear to one having ordinary skill in the art as to what message "the received message" and "the message" refers.

Claim 33 is also rejected under 35 U.S.C. 112, second paragraph, because it refers to "the previously stored row number of the processor unit" (lines 49-50) while there is no previous mention of any "previously stored row number" or any indication to one having ordinary skill in the art as to which of the processor units is considered to be "the processor unit".

Claim 33 is further rejected under 35 U.S.C. 112, second paragraph, for "the stored column number" (line 53) without a previous mention of any "stored column number", "the method steps described above" (line 56) without clearly indicating to one having ordinary skill in the art as to which method steps are being referred, "these" (line 60) without an indication as to what "these" refers, and "respective adjacent surface paneling module" (line 60) wherein many different surface paneling modules have been referenced rendering it unclear as to what modules are considered to be "adjacent" as well as whether "adjacent" surface paneling modules refers to surface paneling modules that are adjacent to a current surface paneling module on one side, two sides, etc.

Claim 47 is first considered to be vague and indefinite because lines 12-13 recite, "determining the distance of the processor unit of the second surface paneling

module from the reference position as a function of the distance information.” Claim 47, however, earlier recites “producing a first message with a processor unit of a first surface paneling module, with the first message containing first distance information which contains the distance of the first surface paneling module or the distance of a second surface paneling module which receives the first message from the reference position”. This limitation contains “distance information which contains...the distance of a second surface paneling module...from the reference position” and not distance information from “the processor unit” of the second surface paneling module from the reference position. Additionally, claim 47 is for “A method for determining a distance from surface paneling modules of a surface paneling module arrangement to at least one reference position”. Therefore, it is unclear to one having ordinary skill in the art whether the distance information is with respect to the paneling module from the reference position or with respect to a processor unit of the paneling module from the reference position.

Claim 47 is also considered to be vague and indefinite because line 25 refers to messages that “are in each case transmitted to processor units of adjacent surface paneling modules”. This limitation is first unclear because there is no indication to one having ordinary skill in the art as to what “each case” refers (i.e. each case of what?). Additionally, since the claim recites several different surface paneling modules, it is unclear to one having ordinary skill in the art as to which surface paneling modules are considered to be “adjacent” and whether “adjacent” surface



paneling modules refers to surface paneling modules that are adjacent to a current surface paneling module on one side, two sides, etc.

Claim 47 is further considered to be vague and indefinite because it recites, “wherein before the determination of the distance of the surface paneling modules from the reference position, the physical positions of the surface paneling modules within the surface paneling module arrangement are determined in that, on the basis of a surface paneling module at an introduction point of the surface paneling module arrangement, position determination messages which have at least one row parameter and one column parameter are in each case transmitted to processor units of adjacent surface paneling modules”. This limitation, however, is first unclear because it is unknown whether “adjacent” surface paneling modules refers to surface paneling modules that are adjacent to a current surface paneling module on one side, two sides, etc. Additionally, this limitation is considered to be unclear because indicating that “physical positions of the surface paneling modules within the surface paneling module arrangement are determined in that...position determination messages which have at least one row parameter and one column parameter are in each case transmitted to processor units of adjacent surface paneling modules” contains no indication to one having ordinary skill in the art how the physical positions of the surface paneling modules are determined or how the “position determination messages” further limit and/or relate to the physical position determination.

Claim 48 is considered to be vague and indefinite because it refers to "the processor unit sending the message" and "the processor unit receiving the message". Claim 47, however, refers to "a first message", "a second message" and "position determination messages" and therefore it is unclear to one having ordinary skill in the art as to what message "the message" refers.

Claim 48 is also rejected under 35 U.S.C. 112, second paragraph, because it refers to "the row number or column number, respectively, of the processor unit" while there is no previous mention of any "row number" or "column number" but only a previous mention of row and column parameters. Therefore, it is unclear to one having ordinary skill in the art as to what "the row number or column number" refers.

Claim 49 is considered to be vague and indefinite because lines 3, 5, 6, and 8 refer to "the received message" and line 12 refers to "the message". Parent claim 47, however, refers to "a first message", "a second message" and "position determination messages" and parent claim 48 refers to "sending the message" and "receiving the message". Therefore, it is unclear to one having ordinary skill in the art as to what message "the received message" and "the message" refers.

Claim 49 is also rejected under 35 U.S.C. 112, second paragraph, because it refers to "the previously stored row number of the processor unit" while there is no previous mention of any "previously stored row number" or any indication to one having ordinary skill in the art as to which of the processor units is considered to be "the processor unit".

Claim 49 is also considered to be vague and indefinite because lines 4-5 recite that "the processor unit's own row number is allocated the row parameter value z". First, there is no previous mention of any row numbers specific to a particular processor and therefore it is unclear as to how the "own row number" relates to previously presented row numbers. Second, by designating "the row parameter value" as "z", it is unclear to one having ordinary skill in the art as to whether "the row parameter value" is the same, or distinct, from the previously presented row parameters of the message.

Claim 49 is considered to be vague and indefinite because it refers to "the processor unit's own column number" while there is no previous mention of any column numbers specific to a particular processor and therefore it is unclear as to how the "own column number" relates to the previously presented column numbers.

Claim 49 is further rejected under 35 U.S.C. 112, second paragraph, for "the stored column number" (line 7) without a previous mention of any "stored column number", "the method steps described above" (line 10) without clearly indicating to one having ordinary skill in the art as to which method steps are being referred, "these" (line 13) without an indication as to what "these" refers, and "respective adjacent surface paneling modules" (line 14) wherein may different surface paneling modules have been referenced rendering it unclear as to what modules are considered to be "adjacent" as well as whether "adjacent" surface paneling modules refers to surface paneling modules that are adjacent to a current surface paneling module on one side, two sides, etc.

Claim 50 is considered to be vague and indefinite because it refers to determining "the respective distance of a processor unit from a reference position". Parent claim 47 is for "A method for determining a distance from surface paneling modules of a surface paneling module arrangement to at least one reference position" and presents "distance information which contains the distance of the...surface paneling module...from the reference position" and therefore it is unclear to one having ordinary skill in the art whether "the respective distance" is with respect to a processor unit or with respect to the surface paneling module itself.

Claim 50 is also rejected under 35 U.S.C. 112, second paragraph, because it refers to "the surface paneling module of a processor unit" while the claim earlier presents "each surface paneling module comprises...at least one processor unit" and therefore it is unclear to one having ordinary skill in the art whether the surface paneling module is part of a processor unit or if the processor unit is part of the surface paneling module.

Claims 27-30 are rejected under 35 U.S.C. 112, second paragraph, because they incorporate the lack of clarity present in their respective parent claims.

### ***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 24-26, 30-33, and 47-50, as may best be understood, are rejected under 35 U.S.C. 102(a) as being anticipated by Sturm et al., "A Novel Fault-Tolerant Architecture for Self-Organizing Display and Sensor Arrays".

With respect to claim 24, Sturm discloses a method for determining a distance from surface paneling modules of a surface paneling module arrangement to at least one reference position (page 1318, column 1, lines 1-7), with electronic messages being interchanged between processor units of mutually adjacent surface paneling modules (page 1317, column 1, lines 3-23), wherein the surface paneling module arrangement has two or more surface paneling modules (page 1317, Figures 4-5), and each surface paneling module comprises: at least one electrical power supply connection, inherently in order to transmit electrical data, (page 1316, column 2, lines 11-20); at least one data transmission interface (page 1316, column 2, lines 11-20 and page 1318, column 1, lines 8-13); at least one processor unit which is coupled to the electrical power supply connection and to the data transmission interface (page 1316, column 2, lines 11-20 and Figure 1); wherein the processor unit is designed such that electronic messages are interchanged between the processor unit and a processor unit for an adjacent surface paneling module, which is coupled to the surface paneling module (page 1317, column 1, lines 3-23), in order to determine the respective distance of a processor unit from a reference position (page 1318, column 1, lines 1-7); wherein each message contains distance information which indicates the distance of the surface paneling module of a processor unit which is sending the message or the distance of the surface paneling

module of a processor unit which is receiving the message from the reference position (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); wherein the processor unit is designed such that the actual distance to the reference position can be determined or can be stored from the distance information in a received message (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); wherein the method, which is carried out for all the surface paneling modules in the surface paneling module arrangement, comprises: producing a first message with a processor unit of a first surface paneling module (page 1317, column 1, lines 3-23), with the first message containing first distance information which contains the distance of the first surface paneling module or the distance of a second surface paneling module which receives the first message from the reference position (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); sending the first message from the processor unit of the first surface paneling module to the processor unit of the second surface paneling module (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); determining the distance of the processor unit of the second surface paneling module from the reference position as a function of the distance information (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); wherein the processor unit of the second surface paneling module produces a second message (page 1317, column 1, lines 3-23) which contains second distance information which contains the distance of the second surface paneling module or the distance of a third surface paneling module which receives the second message, from the reference position (page 1317, column 2, lines 1-12

and page 1318, column 1, lines 1-7); sending the second message from the processor unit of the second surface paneling module to the processor unit of the third surface paneling module (i.e. repeat for each paneling module) (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); determining the distance of the third surface paneling module from the reference position as a function of the second distance information (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); wherein before the determination of the distance of the surface paneling modules from the reference position, the physical positions of the surface paneling modules within the surface paneling module arrangement are determined (page 1316, column 2, lines 11-20) in that, on the basis of a surface paneling module at an introduction point of the surface paneling module arrangement (page 1316, Figure 1), position determination messages which have at least one row parameter  $z$  and one column parameter  $s$  (page 1316, column 1, lines 17-19) (which contains the row number or column number, respectively, of the processor unit sending the message or the row number or the column number, respectively, of the processor unit receiving the message within the surface paneling module arrangement) are in each case transmitted to processor units of adjacent surface paneling modules (page 1317, Figure 3), and the respective processor unit carries out the following process: if the row parameter in the received message is greater than the previously stored row number of the processor unit, then the processor unit's own row number is allocated the row parameter value  $z$  of the received message (page 1317, column 2, lines 1-12); if the column parameter in the received

message is greater than the processor unit's own column number, then the stored column number is allocated the row parameter value of the received message (page 1317, column 2, lines 1-12); and if its own row number or its own column number has been changed on the basis of the method steps described above, then new position measurement messages are produced with new row parameters and new column parameters, which each contain the row number and the column number of the processor unit sending the message or the row number and the column number of the processor unit receiving the message (page 1317, column 2, lines 1-12), and these are transmitted to a processor unit of a respective adjacent surface paneling module (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7).

With respect to claim 25, Sturm discloses that in an iterative method (page 1317, column 2, lines 1-12), the processor unit of the surface paneling module's own distance value is changed if the previously stored distance value is greater than the received distance value (increased by a predetermined value) in the respectively received message (page 1317, column 2, lines 1-12); and wherein in the situation where a processor unit of a surface paneling module changes its own distance value (page 1317, column 2, lines 1-12), this produces a distance measurement message and sends this to processor units of adjacent surface paneling modules (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7), with the distance measurement message in each case containing its own distance as distance information or the distance value which the receiving processor unit has from the



portal processor (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7).

With respect to claim 26, Sturm discloses that the distance value has a value which is greater by a predetermined value than its own distance value (page 1317, column 2, lines 1-12).

With respect to claim 30, Sturm discloses that each surface paneling module is designed as one of the group comprising: a tile, a wall tile, a parquet flooring element, and a laminate element (page 1316, column 2, lines 1-5).

With respect to claim 31, Sturm discloses that at least some of the surface paneling modules have at least one sensor which is coupled to the processor unit (page 1319, column 2, lines 16-22).

With respect to claim 32, Sturm discloses that at least some of the surface paneling modules have at least one of the group comprising: imaging element, sound wave production element, and vibration production element (page 1316, column 2, lines 11-20).

With respect to claim 33, Sturm discloses a surface paneling module arrangement having two or more surface paneling modules (page 1317, Figures 4-5), each surface paneling module comprising: at least one electrical power supply connection, inherently in order to transmit electrical data, (page 1316, column 2, lines 11-20); at least one data transmission interface (page 1316, column 2, lines 11-20 and page 1318, column 1, lines 8-13); at least one processor unit which is coupled to the electrical power supply connection and to the data transmission

interface (page 1316, column 2, lines 11-20 and Figure 1); the processor unit being designed such that electronic messages are interchanged between the processor unit and a processor unit for an adjacent surface paneling module, which is coupled to the surface paneling module (page 1317, column 1, lines 3-23), in order to determine the respective distance of a processor unit from a reference position (page 1318, column 1, lines 1-7); each message containing distance information which indicates the distance of the surface paneling module of a processor unit which is sending the message or the distance of the surface paneling module of a processor unit which is receiving the message from the reference position (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); and the processor unit being designed such that the actual distance to the reference position can be determined or can be stored from the distance information in a received message (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); wherein the surface paneling module arrangement is designed to carry out a method for determining a distance from surface paneling modules of a surface paneling module arrangement to at least one reference position (page 1318, column 1, lines 1-7), with electronic messages being interchanged between processor units of mutually adjacent surface paneling modules (page 1317, column 1, lines 3-23), the method, which is carried out for all the surface paneling modules in the surface paneling module arrangement comprising: providing a first message by a processor unit of a first surface paneling module (page 1317, column 1, lines 3-23), with the first message containing first distance information which contains the distance of the first

surface paneling module or the distance of a second surface paneling module which receives the first message from the reference position (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); sending the first message from the processor unit of the first surface paneling module to the processor unit of the second surface paneling module (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); determining the distance of the processor unit of the second surface paneling module from the reference position as a function of the distance information (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); wherein the processor unit of the second surface paneling module produces a second message (page 1317, column 1, lines 3-23) which contains second distance information which contains the distance of the second surface paneling module or the distance of a third surface paneling module which receives the second message, from the reference position (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); sending the second message from the processor unit of the second surface paneling module to the processor unit of the third surface paneling module (i.e. repeat for each paneling module) (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); determining the distance of the third surface paneling module from the reference position as a function of the second distance information (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); wherein the surface paneling module arrangement is designed such that before the determination of the distance of the surface paneling modules from the reference position, the physical positions of the surface paneling modules within the surface

paneling module arrangement are determined (page 1316, column 2, lines 11-20) in that, on the basis of a surface paneling module at an introduction point of the surface paneling module arrangement (page 1316, Figure 1), position determination messages which have at least one row parameter  $z$  and one column parameter  $s$  (page 1316, column 1, lines 17-19) (which contains the row number or column number, respectively, of the processor unit sending the message or the row number or the column number, respectively, of the processor unit receiving the message within the surface paneling module arrangement) are in each case transmitted to processor units of adjacent surface paneling modules (page 1317, Figure 3), and the respective processor unit carries out the following steps: if the row parameter in the received message is greater than the previously stored row number of the processor unit, then the processor unit's own row number is allocated the row parameter value  $z$  of the received message (page 1317, column 2, lines 1-12); if the column parameter in the received message is greater than the processor unit's own column number, then the stored column number is allocated the row parameter value of the received message (page 1317, column 2, lines 1-12); and if its own row number and/or its own column number have/has been changed on the basis of the method steps described above, then new position measurement messages are produced with new row parameters and new column parameters, which each contain the row number and the column number of the processor unit sending the message or the row number and the column number of the processor unit receiving the message (page 1317, column 2, lines 1-12), and these are transmitted to a processor unit of a

respective adjacent surface paneling module (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7).

With respect to claim 47, Sturm discloses a method for determining a distance from surface paneling modules of a surface paneling module arrangement to at least one reference position (page 1318, column 1, lines 1-7), with electronic messages being interchanged between processor units of mutually adjacent surface paneling modules (page 1317, column 1, lines 3-23), wherein the surface paneling module arrangement has two or more surface paneling modules (page 1317, Figures 4-5), the method comprising: producing a first message with a processor unit of a first surface paneling module (page 1317, column 1, lines 3-23), with the first message containing first distance information which contains the distance of the first surface paneling module or the distance of a second surface paneling module which receives the first message from the reference position (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); sending the first message from the processor unit of the first surface paneling module to a processor unit of the second surface paneling module (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); determining the distance of the processor unit of the second surface paneling module from the reference position as a function of the distance information (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); wherein the processor unit of the second surface paneling module produces a second message (page 1317, column 1, lines 3-23) which contains second distance information which contains the distance of the second surface paneling module or the distance of a

third surface paneling module which receives the second message, from the reference position (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); sending the second message from the processor unit of the second surface paneling module to the processor unit of the third surface paneling module (i.e. repeat for each paneling module) (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); determining the distance of the third surface paneling module from the reference position as a function of the second distance information (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); wherein before the determination of the distance of the surface paneling modules from the reference position, the physical positions of the surface paneling modules within the surface paneling module arrangement are determined (page 1316, column 2, lines 11-20) in that, on the basis of a surface paneling module at an introduction point of the surface paneling module arrangement (page 1316, Figure 1), position determination messages which have at least one row parameter and one column parameter are in each case transmitted to processor units of adjacent surface paneling modules (page 1317, Figure 3).

With respect to claim 48, Sturm discloses that the at least one row parameter and one column parameter (page 1316, column 1, lines 17-19) contains the row number or column number, respectively, of the processor unit sending the message or the row number or the column number, respectively, of the processor unit receiving the message within the surface paneling module arrangement (page 1317, Figure 3).

With respect to claim 49, Sturm discloses that one of the processor unit carries out the following process: if the row parameter in the received message is greater than the previously stored row number of the processor unit, then the processor unit's own row number is allocated the row parameter value  $z$  of the received message (page 1317, column 2, lines 1-12); if the column parameter in the received message is greater than the processor unit's own column number, then the stored column number is allocated the row parameter value of the received message (page 1317, column 2, lines 1-12); and if its own row number or its own column number has been changed on the basis of the method steps described above, then new position measurement messages are produced with new row parameters and new column parameters, which each contain the row number and the column number of the processor unit sending the message or the row number and the column number of the processor unit receiving the message (page 1317, column 2, lines 1-12), and these are transmitted to a processor unit of a respective adjacent surface paneling module (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7).

With respect to claim 50, Sturm discloses that each surface paneling module comprises: at least one electrical power supply connection, inherently in order to transmit electrical data, (page 1316, column 2, lines 11-20); at least one data transmission interface (page 1316, column 2, lines 11-20 and page 1318, column 1, lines 8-13); and at least one processor unit which is coupled to the electrical power supply connection and to the data transmission interface (page 1316, column 2, lines 11-20 and Figure 1); wherein the processor unit is designed such that

electronic messages are interchanged between the processor unit and a processor unit for an adjacent surface paneling module, which is coupled to the surface paneling module (page 1317, column 1, lines 3-23), in order to determine the respective distance of a processor unit from a reference position (page 1318, column 1, lines 1-7); wherein each message contains distance information which indicates the distance of the surface paneling module of a processor unit which is sending the message or the distance of the surface paneling module of a processor unit which is receiving the message from the reference position (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7); wherein the processor unit is designed such that the actual distance to the reference position can be determined or can be stored from the distance information in a received message (page 1317, column 2, lines 1-12 and page 1318, column 1, lines 1-7).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 27 and 28, as may best be understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sturm in view of U.S. Patent No. 5,941,714 to Gorbet et al.



As noted above, the invention of Sturm teaches many of the features of the claimed invention and while the invention of Sturm does teach a plurality of connected surface paneling modules, inherently including at least one electrical power supply connection, and at least one data transmission interface, Sturm does not provide the specific details regarding the connection and interface.

Gorbet teaches digital communication, programmable functioning and data transfer using modular hinged processor elements including a plurality of modules each having at least one electrical power line (column 5, lines 21-30) and at least one data line (column 5, lines 51-57), wherein the processor element is coupled to the electrical power supply connection by means of the electrical power line (column 5, lines 21-30 and Figure 1), and is coupled to the data transmission interface by means of the data line (column 5, lines 51-57 and Figure 1). Gorbet further teaches a plug connector (column 4, lines 21-25 and column 4, line 51 to column 5, line 8) in which an electrical power supply connection and a data transmission interface are integrated (column 5, lines 21-30 and 51-57).

It would have been obvious to one having ordinary skill in the art to modify the invention of Sturm to provide the specific details regarding the connection and interface, as taught by Gorbet, because, as suggested by Gorbet, the combination would have provided suitable means for implementing the power connection and data interface of Sturm while improving the overall operation of Sturm through the use of connections that are flexible and versatile thereby extending the use of the

system of Sturm to a wider variety of designs and applications (column 11, line 65 to column 12, line 2).

12. Claim 29, as may best be understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Sturm in view of Paradisio et al., "Sensor systems for interactive surfaces".

As noted above, the invention of Sturm teaches many of the features of the claimed invention and while the invention of Sturm does provide a plurality of paneling modules, Sturm is silent as to whether the modules are designed as one of wall, floor, or ceiling paneling modules.

Paradisio teaches a sensor system for interactive surfaces including means for providing interactive displays on such surfaces as walls, floors, or windows (page 892, column 1, lines 1-12).

It would have been obvious to one having ordinary skill in the art to modify the invention of Sturm to explicitly indicate that the modules are designed as one of wall, floor, or ceiling paneling modules, as taught by Paradisio, because Paradisio suggests that walls and floors are large flat surfaces that users desire to incorporate with interactive surfaces (page 892, column 1, lines 1-12) and therefore the combination would have improved the applicability of Sturm by incorporating the system into an art recognized as desiring such a modification.

Further, the limitations specifying that the modules are designed as one of wall, floor, or ceiling paneling modules is considered to be an intended use. It has been

held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In the instant case, since the structure of the modules of Sturm are capable of being wall, floor, or ceiling modules, it meets the claim.

Further, it would have been obvious to one having ordinary skill in the art to modify the invention of Sturm to explicitly indicate that the modules are designed as one of wall, floor, or ceiling paneling modules, because the combination would have improved the applicability of Sturm by incorporating the system into a wider variety of applications.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. 6,469,901 to Costner teaches a system and method for cartridge-based geometry-variant scalable electronic systems.

U.S. Patent No. 6,636,000 to Asami et al. teaches a plasma display device with flexible circuit boards and connectors.

U.S. Patent No. 5,857,858 to Gorowitz et al. teaches a demountable and repairable low pitch interconnect for stacked multichip modules.

U.S. Patent No. 6,111,756 to Moresco teaches universal multichip interconnect systems.

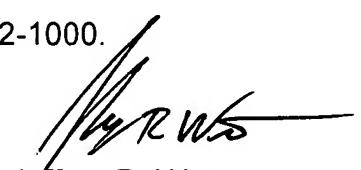
U.S. Patent No. 7,196,694 to Roberts teaches force sensors and touch panels using the same.

U.S. Patent No. 6,864,950 to Zhang et al. teaches an electronic device with active matrix type display panel and image sensor function.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jeffrey R. West  
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Art Unit – 2857

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